

Illustrative render generated from published specifications

18.3 × 65 mm
44.5 g

LG LGAAS41865

LG

18650

NMC

MOOCH-TESTED · 45 A



Live page & updates

2,200 mAh CAPACITY	45 A MOOCH CONTINUOUS	3.7 V NOMINAL · 2.8 – 4.2 V	8.14 Wh ENERGY · 182.92 WH/KG
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REFERENCE ONLY — NOT AN OFFICIAL DOCUMENT

This information is gathered from multiple sources, including manufacturer datasheets, independent third-party testing, and community contributions. Cell specifications vary between production batches and change over time, and no figure here is guaranteed to be correct or current. **Always consult the manufacturer's spec sheet directly.** Use this sheet for reference only — never as the sole basis for a safety-critical decision about charging, discharging, or assembling cells. The cell image is an illustrative render generated from published specifications, not a photograph.

CAPACITY AMONG 18650S #87 of 169 Lowest in databaseHighest Higher discharge than 99% of 18650 cells in our database. Great for high-drain builds.	VOLTAGE OPERATING WINDOW 1.4 V usable Cutoff 2.8 VNominal 3.7 VMax 4.2 V Below nominal the cell sags fast under load; above it, the last of the capacity fills slowly on the constant-voltage taper.
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APPLICATION SUITABILITY

Rule-of-thumb ratings from this cell's capacity and continuous discharge. Check your own load before committing.

Powerwalls	Usable for powerwalls but lower capacity means you'll need more cells to hit your target kWh.
Ebike packs	Marginal. Check your motor's peak draw first. You might get voltage sag under load.
Car audio	Enough discharge to handle amplifier bursts without voltage sag.
High-drain vaping	Above the 25A Mooch CDR threshold. Suitable for regulated and mechanical mods.
Flashlights	Lower capacity means shorter runtime. Better cells are available for flashlight use.
Power tools	Sufficient discharge and capacity for most power tool packs.

IDENTITY

Manufacturer	LG
Model	LGAAS41865
Format	18650
Chemistry	NMC
Wrap colour	Purple (Dark)
Insulator	White
Protection	Unprotected

OPERATING TEMPERATURE

Charging	0°C to 45°C
Discharging	-20°C to 60°C

ENERGY & POWER DENSITY

Energy	8.14 Wh
Specific energy	182.92 Wh/kg
Volumetric density	476.12 Wh/L
Power density (mass)	3,742 W/kg
Power density (volume)	9,739 W/L
Capacity ranking	#87 of 169 18650s

PHYSICAL

Diameter	18.3 mm
Length	65 mm
Weight	44.5 g

ELECTRICAL

Rated capacity	2,200 mAh
Nominal voltage	3.7 V
Max charge voltage	4.2 V
Discharge cutoff	2.8 V
Energy	8.14 Wh
Max continuous discharge	45 A (mooch)
Discharge C-rate	20.5C
Standard charge current	750 mA
Typical charge time	2.9 h
Standard discharge	430mA
Cycle life	300 cycles

C-RATE CONVERSION · 2,200 MAH

C-RATE	CURRENT	THEORETICAL RUNTIME
0.2C	0.44 A	5h 00m
0.5C	1.1 A	2h 00m
1C	2.2 A	1h 00m
2C	4.4 A	30m
3C	6.6 A	20m
5C	11 A	12m
8C	17.6 A	7m 30s

10C	22 A	6m
15C	33 A	4m
20C	44 A	3m

Highlighted row is closest to the rated 45 A continuous discharge.

CHARGING

RATE	CURRENT	ESTIMATED TIME TO FULL
Standard	750 mA	~2h 56m
0.5C	1,100 mA	~2h 00m
1C	2,200 mA	~1h 00m

Constant-current phase only. Real charge time runs longer because of the constant-voltage taper at the end.

SERIES PACK CONFIGURATIONS

Voltages calculated from this cell's own nominal and maximum charge voltage. The 3P columns show one common parallel count as a worked example — scale the parallel group to the capacity you need.

SERIES	NOMINAL	FULLY CHARGED	CELLS AT 3P	CAPACITY	ENERGY
3S	11.1 V	12.6 V	9	6.6 Ah	73 Wh
7S	25.9 V	29.4 V	21	6.6 Ah	171 Wh
10S	37 V	42 V	30	6.6 Ah	244 Wh
13S	48.1 V	54.6 V	39	6.6 Ah	317 Wh
14S	51.8 V	58.8 V	42	6.6 Ah	342 Wh

EXAMPLE PACKS

7S2P 24V ebike / small pack 14 cells · 25.9 V 4,400 mAh · 114 Wh 90 A max · ≈0.62 kg cells	13S4P 48V ebike standard 52 cells · 48.1 V 8,800 mAh · 423 Wh 180 A max · ≈2.31 kg cells	16S4P DIY powerwall 64 cells · 59.2 V 8,800 mAh · 521 Wh 180 A max · ≈2.85 kg cells	4S6P Power tool replacement 24 cells · 14.8 V 13,200 mAh · 195 Wh 270 A max · ≈1.07 kg cells
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SIMILAR CELLS

Same format and chemistry, within ± 500 mAh.

CELL	MAH	CONTINUOUS	WH	WEIGHT	WH/KG
LG LGAAS41865 (this cell)	2,200	45 A	8.14	44.5 g	183
Panasonic NCR18650D	2,700	5.1 A	10	—	—
Sanyo UR18650ZT	2,650	5.3 A	9.8	46 g	213
LG LGDB118650	2,600	—	9.8	—	—
LG LGDBB11865	2,600	—	9.8	—	—
Sanyo UR18650ZTA	2,620	5.8 A	9.7	48 g	202

HANDLING & SAFETY

- Never charge above 4.2V or discharge below 2.8V.
- Store cells at around 3.6–3.8V (roughly 40–60% charge) for long-term storage.
- Don't mix cells with different capacities, chemistries, or states of charge in a pack.
- Inspect wraps before use. A torn wrap can cause a short circuit.
- Always use a BMS or balance charger appropriate for your pack configuration.
- Keep cells away from metal objects, keys, and coins. A short across the terminals can cause fire.

SOURCES & FURTHER READING

Cell Savors page	cellsaviors.com/cell-database/lg-lgaas41865
Manufacturer datasheet	https://www.megacellmonitor.com/pdf/vendor_specs/SPEC_LG_LGAAS...
Independent test (Mooch)	https://www.e-cigarette-forum.com/threads/bench-test-results-v...
Full cell database	cellsaviors.com/cell-database